ABSTRACT

Bit-error-rate (BER) testing includes a data pattern generator transmitting a known data pattern to a device under test (DUT), which processes the data pattern and outputs the processed data pattern to an error analyzer. BER testing of telecommunications systems often uses data patterns in the form of SONET or SDH frames, which have error-checking bytes known as B bytes. The B Bytes computed for a given SONET or SDH frame are inserted into a next SONET or SDH frame. In memory-based BER tests, a fixed number of SONET or SDH frames is input to the DUT by the pattern generator. The last frame of the data pattern is adjusted so that the B bytes calculated using the last frame match the B bytes present in the first frame, which approach avoids parity errors that can occur in response to B byte mismatches between the last and the first frame.